

REMARKS

The Applicants have carefully reviewed the Final Office Action of April 12, 2002. In response the Applicants amend claim 1 to incorporate the subject matter of claim 10 and claim 15 to incorporate the subject matter of claim 19. Additionally, claims 1 and 15 have been amended so as to eliminate any basis for possibly interpreting these claims as product-by-process claims. Additionally, the dependency of claim 11 has been amended to claim 1 and the dependency of claim 20 has been changed to claim 15. Claims 10, 12-14 and 19 are all canceled without prejudice.

Entry of this Amendment into the record is believed to be appropriate since no new issues are raised by this Amendment, and the amendments clearly place the application in condition for formal allowance .

As amended, claim 1 reads upon an acoustical insulation product for a vehicle comprising a blanket of primary and bi-component polymer binder fibers and a facing material adhered to a major surface of the blanket where the product has a densified perimeter flange that provides stiffness to the product and is capable of being held in place on the vehicle by an attachment system. The reference as to how that flange is made has been eliminated from claim 1 and, accordingly, claim 1 should no longer be considered a product-by-process claim.

Amended claim 1 very clearly patentably distinguishes over U.S. Patent 4,946,738 to Chenoweth et al. when considered in combination with U.S. Patent 5,773,375 to Swan et al.

There is no teaching or suggestion whatsoever in the Chenoweth '738 patent relating to the provision of a product with a perimeter flange. In fact, the Examiner has previously explicitly noted the failure of the Chenoweth '738 patent to disclose any form of perimeter flange. The Examiner, however, has argued that it is reasonable to presume that the claimed flange is inherent since the reference allegedly uses the same starting materials and like processes for the production of a similar end product. As support for this inherency argument, the Examiner relies upon *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). The *Fitzgerald* decision, however, only relates to product-

by-process claims and as amended, claim 1 is not a product-by-process claim.

Accordingly, the *Fitzgerald* decision is not controlling. The fact of the matter is the primary reference to Chenoweth et al. simply does not disclose the claimed structure nor in any way suggests the provision of such a perimeter flange structure for the product being claimed.

In accordance with 35 U.S.C. §112, the specification of a patent application “. . . shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most clearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor for carrying out his invention.” In the Chenoweth et al. patent the Applicants describe in great detail the production of a non-woven fibrous product and emphasize the improved product strength, stiffness and shape retentivity of the resulting product (note, for example, column 8 lines 11-38). Further, at column 3 lines 49-56 and 61-66, the Chenoweth et al. patent clearly states objectives of providing a product with “sufficient strength to the matrix to permit handling and further processing” and “good strength and rigidity which facilitates modular assembly of automotive headliners and similar products.”

The Examiner cannot deny that a major focus and intent of the inventors in the Chenoweth et al. patent was to produce a stronger product with better rigidity and handling characteristics. Despite this, there is no disclosure anywhere in the Chenoweth et al. patent of the concept of providing any form of perimeter flange in order to increase strength and rigidity. When the failure to disclose a perimeter flange in any form is considered in light of (1) the clear objectives of the Chenoweth et al. patent to increase strength and rigidity and (2) the clear requirements of disclosure in the patent statutes as set forth in 35 U.S.C. §112, it is very clear that the providing of a perimeter flange to increase the strength and rigidity of the product was simply not considered or envisioned by the inventors in the Chenoweth et al. patent. Thus, the Examiner's inherency argument is improper in this instance. Simply stated present

claim 1 recites a structure that is neither taught nor suggested in the primary reference to Chenoweth et al.

The secondary reference to Swan et al. does disclose an acoustical insulator formed with a perimeter flange or reduced thickness area 17. It must be appreciated, however, that the Swan et al. reference explicitly teaches the provision of the reduced thickness area 17 on a product having a web of melt-blown polypropylene rather than a web or blanket of primary fibers and bi-component polymer binder fibers as set forth and claimed in claim 1 of the present patent application. Thus, when considered individually the Swan et al. reference, like the Chenoweth et al. reference, fails to provide a proper basis for rejecting the present claims.

Accordingly, the question becomes, is there any motivation to combine the references in the manner suggested by the Examiner?

The primary reference to Chenoweth et al. incorporates a web or blanket consisting of glass fibers and synthetic bi-component fibers that does not include a perimeter flange. Further, the Chenoweth et al. patent clearly teaches a product of sufficient strength and rigidity for use as a headliner in accordance with its objectives. Thus, there is no motivation present in the Chenoweth et al. patent to lead one skilled in the art to add a perimeter flange to the product to add additional strength and rigidity. The Swan et al. patent relates to a web of melt-blown polypropylene that may be provided with a perimeter flange. The Swan et al. patent does not refer to or disclose any form of product including a web of glass fibers and synthetic bi-component fibers as taught in the Chenoweth et al. patent. It is, therefore, unclear what effect a perimeter flange of densified material will have on a web constructed from the materials disclosed in the Chenoweth et al. patent and there is no clear basis for the incorporation of such a densified perimeter flange into the Chenoweth et al. product. Specifically, the cited art does not teach that anything desirable is to be gained.

Stated another way, neither the Chenoweth et al. '738 reference nor the Swan et al. '375 reference teach or suggest any added benefit to be achieved by the proposed

combination (i.e. the adding of a perimeter flange to the Chenoweth et al. product) and, accordingly, the rejection under 35 USC §103 of claim 1 is clearly improper. As noted by the Court of Appeals for the Federal Circuit in *In re Laskowski*, 10 USPQ2d 1397 (Fed. Cir. 1989), “. . . the mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.” In this instance, the Chenoweth et al. patent establishes that the desired strength and rigidity for a glass fiber and bi-component fiber blanket headliner product is achieved in the absence of a perimeter flange and, accordingly, the desirability of the modification is clearly not taught in the cited art. Since the Swan et al. reference relates to a melt-blown polypropylene based web, it does nothing to address this shortcoming of the primary reference. Thus, claim 1 should be allowed.

Claims 2-9 and 11 which depend from claim 1 and are rejected on the same grounds are equally allowable for the same reasons. Further, these claims provide additional limitations to provide still further support for their allowability. For example, claim 4 explicitly provides that the flange has a thickness of less than about 15% of the thickness of the blanket. No specific structure of this nature is in any way taught or suggested in either of the prior art references.

Claim 5 provides that the facing material of the product of claim 1 is water resistant. As explicitly acknowledged by the Examiner, the Chenoweth et al. patent does not teach this concept. Further, the secondary reference to Swan et al. only teaches the concept of providing a barrier layer of thermoplastic film on an insulation web of melt-blown microfiber polymer and in no way teaches or suggests that such a barrier layer of water resistant facing material can be provided on a blanket of fibers as set forth in claim 1 of the present application.

Claim 11 explicitly provides that the primary fibers of the blanket are polyethylene terephthalate fibers and that the bi-component binder fibers include a core of polyethylene terephthalate and a sheath of polyethylene terephthalate. None of the cited references whether considered singularly or in combination teach or suggest such a structure. In fact, the Chenoweth et al. patent makes no mention of

Polyethylene terephthalate. Accordingly, there is no basis whatsoever for the rejection of claim 11 which should be formally allowed.

Amended independent claim 15 reads on an acoustical insulation product for a vehicle comprising a blanket of polymer fibers and a water resistant facing material wherein the blanket of polymer fibers includes primary fibers and bi-component polymer binder fibers that are made of a principal polymer component and a binder polymer component. The binder component has a softening point lower than the softening point of the principal component. Further claim 15 provides that the binder component has been heated to a temperature that is insufficient to soften the principal component but sufficient to soften the binder component to bond the multi-component polymer binder fibers and the primary fibers to themselves and to each other.

As explicitly noted by the Examiner, the Chenoweth et al. patent does not disclose any form of facing material that is water resistant. Further, while the Swan et al. patent discloses an acoustic insulation laminate with a water shield or barrier of thermoplastic film, the Swan et al. reference only teaches providing such a film on a web of microfibers and specifically thermally stabilized melt-blown polypropylene microfibers. Thus, there is no teaching or suggestion in the secondary reference to Swan et al. to in any way lead one skilled in the art to conclude that a water resistant facing material may be laminated to a blanket of the type set forth and claimed in claim 15. Accordingly, claim 15 very clearly patentably distinguishes over the prior art and should be formally allowed.

This is also true of claims 16-18 and 20 which depend from claim 15 and, therefore, define over the prior art for the same reasons. Additionally, these dependent claims recite further structural features that distinguish over the art and further support their allowability. For example, claim 20 provides that the primary fibers are polyethylene terephthalate fibers and that the bi-component fibers include a core and sheath of polyethylene terephthalate. In this instance it is important to note that the Chenoweth et al. patent makes no mention of polyethylene terephthalate anywhere in the document and, accordingly, it does not teach an insulation product

with a blanket of polyethylene terephthalate fibers as set forth and claimed. Further, the secondary reference to Swan et al. explicitly recites a web of melt-blown polymer fibers but, likewise, does not teach a blanket including primary fibers and bi-component fibers all made from polyethylene terephthalate. Since neither the primary reference to Chenoweth et al. nor the secondary reference to Swan et al. teaches or suggests the claimed blanket material when considered individually, they certainly cannot possibly teach or suggest the claimed blanket material when combined to formulate a rejection. As such, claim 20 very clearly patentably distinguishes over the cited art and should be allowed.

Since amended claim 1 now incorporates the subject matter of claim 10 and the Examiner has previously failed to find that the combination of U.S. Patent 5,459,291 to Haines et al. with the Swan et al. '375 patent fails to provide a basis for the rejection of claim 10, amended claim 1 patentably distinguishes over these references as well.

In summary, the present amendment raises no new issues and merely emphasizes the patentably distinguishing features of the present invention over the cited art thereby placing the application in condition for formal allowance. Upon careful review and consideration it is believed the Examiner will agree with this proposition. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited. If any fees are required pertaining to this Amendment, the Applicants request that they be charged to Deposit Account number 50-0568.

Respectfully submitted,



Stephen Barns  
Reg. No. 38,037

Date: 11 JUNE 2002  
Owens Corning  
Patent Dept., Bldg. 54  
2790 Columbus Road  
Granville, Ohio 43023  
(740) 321-7162



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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application :  
QINGYU ZENG ET AL. :  
Ser. No. 09/474,536 : Examiner: Torres Velazquez, N.  
Filed: December 29, 1999 : Group Art Unit: 1771  
For: ACOUSTICAL FIBROUS INSULATION  
PRODUCT FOR USE IN A VEHICLE

RECEIVED  
JUN 21 2002  
TECHNOLOGY CENTER 1700

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

1. (Amended) An acoustical insulation product for a vehicle comprising a blanket of fibers and a facing material adhere to a major surface of the blanket, the product having a densified perimeter flange, [made by pressing the facing material and an edge portion of the blanket together], the flange providing stiffness to the product, and the flange being capable of being held in place on the vehicle by an attachment system; said blanket of polymer fibers including primary fibers and bi-component polymer binder fibers that are made of a principal polymer component and a binder polymer component, the binder component having a softening point lower than the softening point of the principal component, and the binder component having been heated to a temperature that is insufficient to soften the principal component but sufficient to soften the binder component to bond the multi-component polymer binder fibers and the primary fibers to themselves and to each other.

11. (Amended) The acoustical insulation product of claim 1 [10] in which the primary fibers are polyethylene terephthalate fibers and in which the bicomponent binder fibers include a core of polyethylene terephthalate and a sheath of polyethylene terephthalate.

15. (Amended) An acoustical insulation product for a vehicle comprising a blanket of polymer fibers and a water resistant facing material adhere to a major surface of the blanket, the product being capable of being held in place on the vehicle by an attachment system; said blanket of polymer fibers including primary fibers and bi-component polymer binder fibers that are made of a principal polymer component and a binder polymer component, the binder component having a softening point lower than the softening point of the principal component, and the binder component having been heated to a temperature that is insufficient to soften the principal component but sufficient to soften the binder component to bond the multi-component polymer binder fibers and the primary fibers to themselves and to each other.

20. (Amended) The acoustical insulation product of claim 15 [19] in which the primary fibers are polyethylene terephthalate and in which the bicomponent binder fibers include a core of polyethylene terephthalate and a sheath of polyethylene terephthalate.